April 4, 1984

Mr. Benjamin E. White
Environmental Engineer
Total Petroleum, Inc.
East Superior Street
Alma, Michigan 48801

Dear Mr. White:

The operating license issued May 18, 1982, for your Company's hazardous waste treatment area, authorizes the Director of the Michigan Department of Natural Resources (MDNR) to require monitoring for hazardous wastes or hazardous waste components (Part I.16) and outlines specific monitoring requirements (Part II.4). In response to these monitoring requirements, your Company has collected several sets of samples of shallow and deep groundwater and soil-pore water beginning in July, 1982. Staff of the MDNR have reviewed these various submittals and responded outlining the deficiencies and inadequacies in these data. In response to these staff comments, representatives of your Company and our staff have had meetings and you have proposed and conducted numerous follow-up sampling efforts.

Your latest submittals have proposed further sampling efforts to measure resistivity, soil contaminants, expanded groundwater sampling and more detailed attempts to define the specific contaminants in the groundwater with GC/MS analyses of groundwater.

It is clear, based on the numerous samples collected, that the groundwaters in the vicinity of the land treatment area are contaminated. On July 7, 1983, you first notified Mr. James Cleary, Acting Director of the MDNR, as required in Part I.29 of the license, that conductivity exceeded background concentrations in samples collected in June, 1983 in two test wells (5 and 6) and total organic carbon exceeded background levels in one test well (6). A follow-up series of samples collected in August, 1983 and submitted on September 6, 1983, showed that the groundwater in seven other wells (3, 15, 16, 17, 18, 19 and 20) exceeded background levels of the original two constituents plus chloride, sulphate and/or sodium.

[illegible] on [illegible] 28, 1983, [illegible] additional wells contaminated (11, 22, and 23) and additional constituents (oil and grease, iron, manganese) exceeding background levels.

It appears lead levels may also be elevated above background levels even though your submittals have indicated that background mean was calculated due to a change in the analytical method during the first year's sampling. However, during the second year of sampling (1983) all values for lead in the background well (4) were less than detectable (0.0003 mg/l). Detectable lead concentrations were detected in wells 6, 9, 17, 19 and 20 at levels as much as 100 times the limit of detection (0.031 mg/l in well 20).

Your Company's position has consistently been that the groundwater contamination has not resulted from the present waste disposal activities at the land treatment facility. You have maintained that these groundwaters are contaminated due to the past practices of your Company of disposing of wastes in pits on a portion of the site now occupied by the land treatment facility. Because of this contention, the MDNR allowed the extended series of studies and investigations to be conducted during 1983. We agreed that your Company should collect these additional samples and conduct the additional investigations to determine:

1. The source of the contamination
2. The specific constituents that were elevated in the groundwater
3. The horizontal and vertical extent of the contaminated groundwater

Despite the various sampling efforts and investigations conducted since 1982 at this facility, these three questions have not been adequately or accurately answered.

It is the opinion of staff that the groundwater contamination originates in the land treatment area. Given that your Company has had adequate time and has not proven the land treatment facility is not the source of contamination, we must conclude the land treatment system has failed. You should therefore, stop applying hazardous waste to the land treatment system as required in Part II.6.A.1 of the operating licenses for this facility.

Parts II.6, A2, 3 and 4 of the operating license require that your Company immediately prevent off-site migration of contaminants, take appropriate additional action prescribed in the contingency plan and take action to capture and treat escaped material. You should, as soon as possible, but in no event later than April 20, 1984, comply with these steps. Given that the groundwater contamination may, in fact, result from past waste disposal practices and that an extended amount of study has already

been conducted at this site, we would consider a limited extension of this compliance deadline for your Company to conduct additional studies. Such studies must adequately and accurately answer the above three general questions and must be completed by July 1, 1984. We would agree to meet with your Company to review and comment on any proposals you would make to answer these questions and we would further agree to complete our review of all available data and make a final decision by August 1, 1984.

If you do not wish to conduct further studies, you must comply with the above operating license requirements (Parts II.6.A.2, 3 and 4) by the above date (April 20, 1984). In either event, no further hazardous wastes are to be applied to the land treatment system unless and until you receive written approval from me. I will only issue such approval if I am confident that the land treatment system has not failed.

If you have questions or need clarification, please contact this office.

Sincerely,

Delbert Rector, Chief
Hazardous Waste Division
517-373-2730

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